nord drum 2

modeling percussion synthesizer

User Manual
Nord Drum 2

Part No. 50416
Print Edition 1.0

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CAUTION - ATTENTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
RISQUE DE SHOCK ELECTRIQUE
NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED PERSONNEL.

ATTENTION*:POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE.*
AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L´USAGER.
CONFIER L´ENTRETIEN AU PERSONNEL QUALIFE.
AVIS*: POUR EVITER LES RISQUES D´INCIDENTE OU D´ELECTROCUTION, N´EXPOSEZ PAS CET ARTICLE A LA PLUIE OU L´HUMIDITET.*

The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole éclair avec le point de flèche à l´intérieur d´un triangle équilatéral est utilisé pour alerter l´utilisateur de la presence à l´intérieur du coffret de "voltage dangereux" non isolé d´ampleur suffisante pour constituer un risque d´éléctrocution.

The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Le point d´exclamation à l´intérieur d´un triangle équilatéral est employé pour alerter l´utilisateur de la présence d´instructions importantes pour le fonctionnement et l´entretien (service) dans le livret d´instructions accompagnant l´appareil.

Instructions pertaining to a risk of fire, electric shock or injury to persons.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

Warning - When using electric products, basic precautions should always be followed, including the following:

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Additional Safety Information

No naked flame sources, such as lighted candles, should be placed on the apparatus;

Il convient de ne pas placer sur l´appareil de sources de flammes nues, telles que des bougies allumées;

Do not use the apparatus in tropical climates.

L´appareil n'est pas destiné á étre utilisé sous un climat tropical.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

L´appareil ne doit pas étre exposé á des égouttements d´eau ou des éclaboussures et de plus qu´aucun objet rempli de liquide tel que des vases ne doit étre placé sur l´appareil.

The maims plug is used as the disconnect device and shall remain readily operable.

Lorsque la prise du résau d'alimentation est utilisée comme dispositif de déconnexion, ce dispositif doit demeuré aisément accessible.

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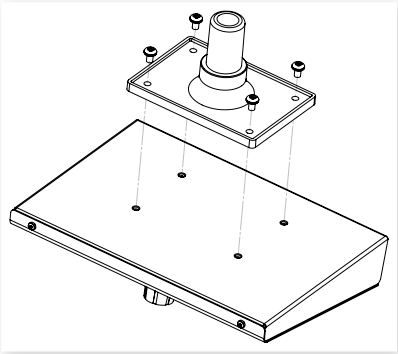
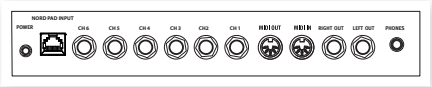
1 Stand holder & connections

Attaching the stand holder

The stand holder makes it possible to mount the Nord Drum 2 on a stand that is equipped with a clamp. The stand holder with its diameter of 23 millimeter is designed to fit with most general purpose clamps.



Connections



Phones

Connect a stereo headphone to the Phones output. This is a 1/8" jack.

Left, Right Out

The L and R outputs are line level signals on unbalanced ¼" jacks.

⚠ *Always turn on the Nord Drum 2 first and the sound system last, and the reverse order when you wish to turn it off again.*

⚠ *The Nord Drum 2 is capable of producing sounds with a very wide and rapidly changing dynamics and frequency ranges. Be careful when you use the unit and when you edit the sounds. Keep the level at moderate settings, in order not to overload a connected sound system by making drastic changes with the available parameters.*

MIDI In

Connect the MIDI Input to a drum pad or sequencer if you want to control the sounds in the Nord Drum 2 via MIDI. The MIDI Input is also used to update the unit with new operating systems.

MIDI Out

Connect the MIDI Output to a computer or sequencer if you want to use the Program Dump feature to transfer the settings to the sounds in the Nord Drum 2 via MIDI. A performance on pads connected to the Trig Inputs or on a Nord Pad will also be transmitted as MIDI notes.

Trig Inputs CH 1 – CH 6

Connect a suitable signal source to the Trig Input ¼" jacks. These inputs can be used with a variety of different signals. The sensitivity and the threshold of the inputs can be adjusted by using the Inp Sens and Inp Thres parameters, read more about this in the following chapter.

The Nord Drum 2 has been tested with many different pads during the development. The Trig Inputs are designed to be very versatile and to accept many different kinds of signals. They are able to provide you with a very fast and dynamic response.

If you experience double triggered sounds, flams or a slow response from the Nord Drum 2, make sure that you adjust the Trig Type, Inp Thres and Inp Sens parameters. Read more on how to adjust these settings this on page 6

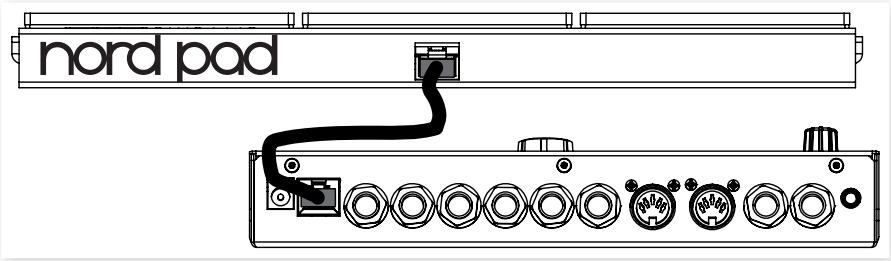
Power

Connect the Nord Drum 2 power supply to the Power input. If the original supply is not available, use only a 12 volt DC, 250 mA adapter, with a barrel type plug that has the positive current on the tip. The outer diameter of the plug is 5.5 millimeter and the inner diameter is 2.1 millimeter.

Nord Pad Input

Connect a Nord Pad to the RJ45 connector, using the cable that is supplied with the Nord Pad.

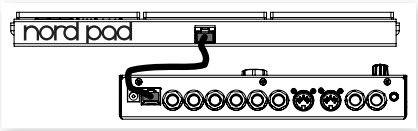
⚠ *This connection can not be used with any other equipment. Do not try and connect a computer or any other RJ45 equipped unit*



2 Getting Started

Connect a Nord Pad

1 Use the supplied CAT-6 cable to connect a Nord Pad to the Nord Pad Input on the Nord Drum.

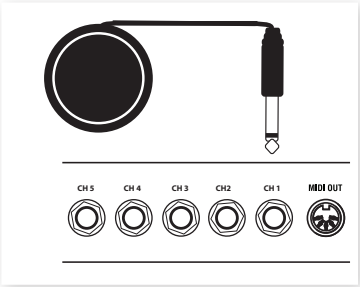


ℹ *The Input Sensitivity will be automatically set when a Nord Pad is detected.*

If you want to add for example a kick drum pad to the Nord Drum 2 while using the Nord Pad, connect this pad to the CH 1 input. The other inputs are disabled when the Nord Pad is connected.

Connecting pads

1 Connect your pads to the six Trig Inputs on the Nord Drum 2. The Trig Inputs can be used with mono or stereo connectors.



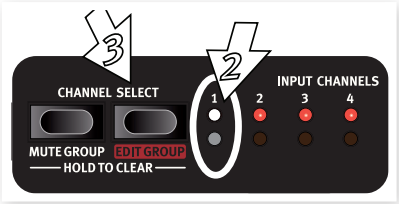
In general, the factory sounds use Channel 1 for Bass drum sounds, channel 2 for Snare and channel 3 to 6 for toms.

Adjust Input sensitivity

It is important to adjust the Input Sensitivity when using pads from other manufacturers, in order to be able to use the full dynamic of the Nord Drum 2.

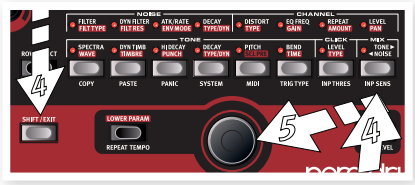
1 Strike the pad, listen to the sound from the Nord Drum 2 and look at the Input Trig Level LEDs for that particular channel. The LEDs indicate the strength of the incoming trigger signal.

2 The red LED should be lit a bit longer when you hit the pad with your strongest force.



3 Press the Channel Select button to move the solid red LED to the channel that the pad is connected to. This is called to move the Edit focus, you set the unit to be ready to change the settings on that particular channel.

4 Hold Shift and press the Inp Sens button on the Nord Drum 2 panel. The red LED above the button will start to blink to indicate that the parameter printed below the second row is active for editing.



5 Strike the pad and adjust the Input sensitivity by turning the Dial to match the pad response and your striking force.

Threshold

If you have several pads or other pieces in your kit that are mounted on the same hardware, use the Inp Thres parameter to eliminate any unwanted, accidental triggers from other units.

1 Select the Channel that is receiving the unwanted triggers.

2 Hold Shift and press the Inp Thres button.

3 Strike the pad or drum that causes the unwanted triggers and raise the Inp Thres value with the dial until the Nord Drum 2 channel stops triggering.

4 Strike the pad that should trigger the Nord Drum 2 to verify that the new Inp Thres setting has not changed the desired response.

MIDI Channel

If you wish to control the Nord Drum 2 with a MIDI controller, the MIDI channel and the notes that this controller transmits must be matched to MIDI channel of the Nord Drum 2 to trigger the four channels. The default MIDI Channel is channel 10.

1 Connect a MIDI pad or other MIDI controller to the MIDI Input on the Nord Drum 2.

2 Hold Shift and press the MIDI Ch button repeatedly to access the “Ch” setting.

3 Turn the Dial to select the MIDI channel you wish to use.

ℹ *The LED above the MIDI Ch button will flash to indicate that your are editing System parameters.*

4 Transmit a MIDI note or other message from the MIDI controller. The incoming channel will be displayed in the LED.

ℹ *The Nord Drum 2 can only receive on one MIDI channel at a time.*

MIDI Note assignment

When the Nord Drum 2 is shipped from the factory, channels 1 to 6 are assigned to the following MIDI note numbers: 60, 62, 64, 65, 67 and 69. Here is how to change this if you wish:

1 Connect a MIDI pad or other MIDI controller to the MIDI Input on the Nord Drum 2.

2 Press the Channel Select buttons on the Nord Drum 2 to select one of the channels.

3. Hold Shift and press the MIDI button repeatedly until you see a “n” followed by a number in the display.

4. Turn the dial to set the desired MIDI Note Number for that channel.

5. Repeat steps 2, 3 and 4 to assign the other channels to the additional MIDI note numbers that the MIDI unit transmits.

6. Press the Program button to Exit the System edit mode.

Four Modes

When the display shows the letter P followed by numbers, this is the Program Mode. Programs are organized in Banks with 99 Programs each. Turn the Dial to select any of the available programs.

The Edit Mode is active when one of the red LEDs in the two rows below the LED and above the buttons are lit and the display shows one or two sets of numbers and/or characters. This is when you can change the settings of the selected parameter with the Dial.

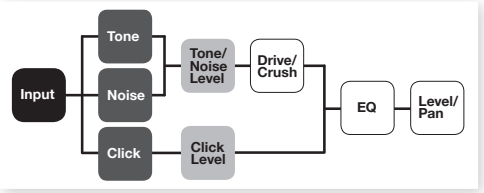
The Solo Edit Mode is active if you hold Shift and press the Row Select/Solo Edit button. Only the component that is currently being edited will be heard when you trigger the channel.

When one of the lower row LEDs are flashing, this mean that the System Mode is active where the parameter printed below the second row button is adjustable with the Dial.

Basic editing

The Nord Drum 2 has 6 channels, it can produce 6 simultaneous sounds. Each one of the channels has a complete and identical set of parameters.

A sound in the Nord Drum 2 is created with a blend of up to three components: Noise, Tone and Click and the effects. Each one of these components has their individual set of parameters.



The Tone can be described as the “body” of the sound, the noise is a non-pitched addition with variable length and the click is the very transient, like the contact sound of the stick on whatever you are hitting. These components can be processed by effects, such a distortion, equalizer and a repeat effect.

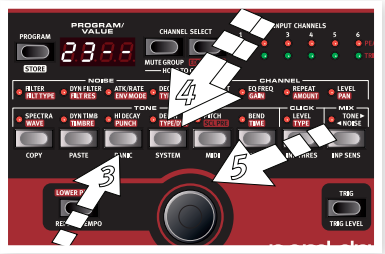
1. Use the Trig button in the lower right corner to play the sound on one channel at a time. Triggering sounds from the panel are made with a fixed velocity.

If you have pads connected, these can be used as well and will make the sounds respond to the velocity of your playing.

2. Press the Channel Select button repeatedly to select one of the six channels.

The channel parameters are accessed with the grid of two rows with eight buttons.

3 A parameter is selected by simply pressing a button. This will activate Edit Mode and the display will show parameter values.



4 To change the row to the lower set of parameters, double-tap on a parameter button or use the Row Select button to the left.

5 Turn the Dial to change the setting of a parameter.

6 Press the Channel Select button repeatedly to select which one of the six channels to edit.

The Lower parameters

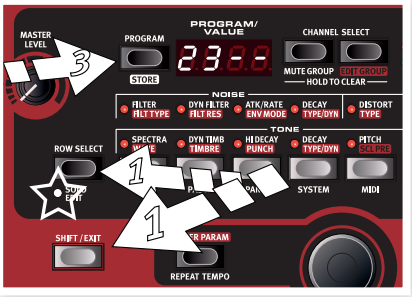
15 of the buttons have additional parameters assigned to them, indicated with red text. These are displayed with dual values in the display with the red parameter to the right.

1 The additional right value is changed by holding down the parameter button and then turning the Dial.

Solo Edit

The Solo Edit feature can be used to playback only the Noise, Tone or Click components when you select the parameters for these. This allows you to edit the parameters and only hear the particular component you are working with in isolation.

1 Hold Shift and press the Row Select/ Solo Edit to activate the Solo Edit mode.



2 Strike a pad or use the Trig button to hear only the component that is currently being edited.

If you switch from one component to another, the soloing will also be switched.

3 Press the Program button to exit the Solo and Edit mode. The LED will show a P followed by numbers.

Memory Protect

When the Nord Drum 2 is shipped from the factory, storing programs to the memory is not possible until you turn off the Memory protection. This is done with one of the System parameters.

If the Memory Protect is On, the display will show "Prot" when you try to Store a Program

1 Hold Shift and press repeatedly on the System button until "Pr On" is shown in the display.

2 Turn the Dial to the "Pr Of" setting.

This will allow you to store programs until this parameter is set to On again.

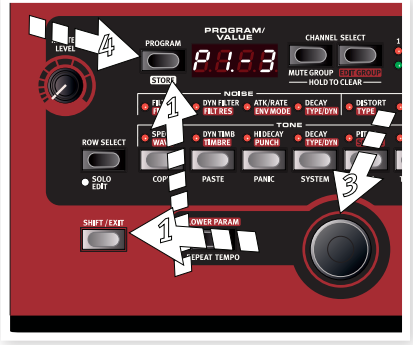
3 Exit the System mode by pressing the Program button.

Storing

When a Program has been changed, this is indicated with a dot to the right of the program number.

If you select another program, your edits will be lost. If you want to keep any changes you have made, you have to Store the edited program.

1. Hold Shift and press the Program/Store button.
2. The display will start to blink.



3. Select a location for the new program with the dial.
4. Press Program/Store again.

If you do step 4 without turning the Dial, the edited program will be stored to the current location.

Storing to a new location

1. Hold Shift and press the Program/Store button. The display will start to blink.
2. Use the Dial to pick a location for the new Program.
3. Confirm your intentions by pressing Program/Store a second time.

This method can also be used to make copies of a Program.

3 Reference

The Panel

Master Level

The Master Level controls the overall output level of the Nord Drum 2. This is not a programmable control.

Program/Store

Press the Program button to exit any other mode and to enter the Program mode. The LED display will show a P followed by two numbers, the Bank and the Program There are two Banks with 99 programs each in the Nord Drum 2.

ℹ *If a program has been edited but not yet stored, this will be indicated by a dot in the lower right corner of the LED.*

Storing a program

The process on Storing a Program is described on page 10.

Program/Value LED display

Program mode is indicated with a P, followed by numbers. The first number is the bank, the second number is the Program number.

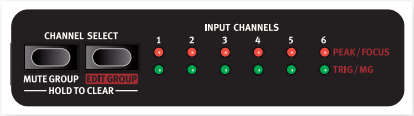
Edit mode is when a parameter in the Nord Drum 2 is selected. The presentation of the settings will be made with numbers and/or characters. Most parameters are indicated with dual settings, one indicated to the right and the other to the left in the display.

When you want to change one of the red labeled parameters (for example Filter Type LP in the illustration), hold down the “Lower Param” button and turn the dial. You can also hold down that particular parameter button and turn the Dial. These lower parameters are always to the right in the display.

Solo Edit mode is activated by holding Shift and pressing the Row Select/Solo Edit button. The Solo Edit LED will blink and only the component that is currently being edited will be heard.

System mode is activated when the System parameters are selected by holding Shift and pressing a parameter button.

Channel Select



Press the Channel Select buttons repeatedly to select the channel to be triggered with the Trig button on the panel and/or to be edited with the parameters. The red LEDs will indicate which channel is selected.

💡 *You can use pads to quickly select the channel to edit, if no channel has been previously selected with the Channel Select button. If the button has been used to manually select a channel, press the Program button once to get back to the quick-select-edit-channel-by-pads mode (QSECBP™).*

Mute Group

Hold Shift and press the Mute Group button to select several channels as part of a Mute Group. The Mute Group will be indicated by steady lit green LEDs. The Mute Group allows you to mute the output of one channel that is part of the group by playing on any other channel in the Mute Group. The Mute Group selection will be saved in a Program.

Hold Shift and the Mute Group button for a little longer to clear the Mute Group.

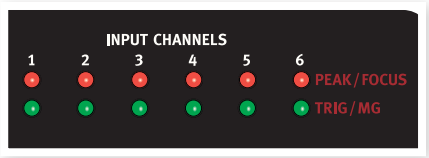
Edit Group

Hold Shift and press the right Channel Select button to add/select several consecutive channels as an Edit Group. The selection begins with the current channel and adds one or more to the right of it depending on how many times you push the button. An Edit Group allows you to change the setting of one parameter on all the grouped channels at the same time.

ℹ *Edit groups are not saved as part of programs.*

Hold Shift and the Edit Group button for a little longer to clear the Edit Group.

Input Trig Level LEDs



The Input LEDs will flash to indicate the activity in the six channels. A solid red LED indicates that a channel is selected for editing.

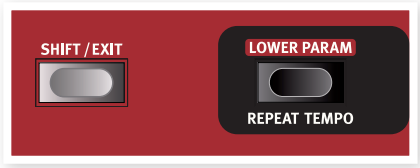
Peak/Focus red LEDs

The upper LEDs are red and will flash briefly when a trigger input receives a strong signal. It will be lit up in a longer duration when the input receives an optimal, as-hard-as-you-can-strike signal. Solid red LEDs are used to indicate an Edit Group.

Trig/MG green LEDs

The lower LEDs are green and will blink on Channel activity. They are also used as indicators when you create a Mute group.

Shift/Exit



The Shift button is used together with the buttons to access additional parameters. These additional parameters are identified with the text below the buttons.

The Shift button can also be used to Exit a Store operation, if you change your mind about storing a program.

Lower Param/Repeat Tempo

Hold the Lower Param button and turn the Dial to change the setting of the parameters labeled in red.

Hold Shift and Repeat Tempo to change the tempo of the repeats with the Dial. The tempo range is from 30 to 1000 BPM.

Dial

The Dial is used to select programs and to change the setting of a selected parameter.

Trig/Trig Level

Use the Trig button to trigger a selected channel from the unit itself. Hold Shift and the Trig button to be able to adjust the Trig button's velocity level with the Dial.

Parameter buttons

The parameters are accessed with the row of eight buttons. Edit mode is activated as soon as you press one of these buttons.

If a button activates a parameter in the upper row, a quick double-tap on the same button or by pressing the Row Select button will move the edit focus to the lower row parameters.

Hold down the Lower Param button (or the actual parameter button in question) and turn the Dial to edit a lower parameter.

Noise Parameters

The noise filter and attack/decay parameters can be used to sculpt the sound of the noise.

Filter

The Filter parameter is a control that sets the frequency where the filter will begin to affect the noise. The actual sound that is produced depends on the Filter Type, see below.

Filter Range: 0 – 50

Filt Type

There are three filter types to choose from: Low Pass, High Pass and Band Pass, all with a 24 dB/octave slope.

Filter Type: LP, HP, BP

Dyn Filter

You can control the filter with the striking force. This parameter is bipolar, you can set a positive or a negative amount to open or close the filter with the striking force.

Range: -19 to 0 to 20

Filt Res

Resonance is used to emphasize frequencies around the filter cutoff frequency. This can be perceived as making the sound thinner.

Range: 0 – 10

Atk/Rate

Increasing the attack makes the beginning of the noise softer, it builds up in level. If the Env Mode is set to any of the repeating modes, this sets the rate of the repeats.

Range: 0 – 50

Env Mode

The noise envelope (attack, decay) can be set to a traditional, one shot behavior (Ad), It can also be set to a looping behavior, which means that it will repeat itself, the r1 to r3 and c settings, during the decay.

Range: Ad, r1, r2, r3, c

Decay

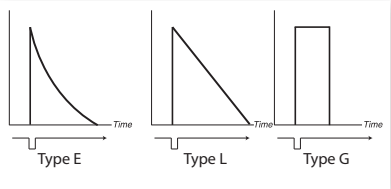
The Decay parameter controls the length of the noise. A higher value means a longer noise.

Range: 0 – 50

Type/Dyn

This parameter have two functions. Choose between Exponential, Linear or a Gated curve of the noise envelope. If you keep turning the Dial you will be able to set an second decay time, a time that will gradually be used when you use more striking force. This second decay time can be either longer or shorter than the “original” decay.

Range: E, L, G, Exx, Lxx, Gxx



Channel Parameters

Use the Channel parameters to add distortion, eq (tone control) and repeats to the sound and to set the level and panning of the channel.

Distort

This parameter adds distortion to the sound.

Range: 0 – 50

Type

Select between a tube amplifier type overdrive (dr) or a sample rate reduction (Sr).

Range: dr, Sr

Eq Freq

The onboard equalizer has an adjustable frequency between 50 Hz and 12 kHz.

EQ value	Approx. frequency
4	125 Hz
8	250 Hz
15	500 Hz
25	1 kHz
33	2 kHz

ℹ *If the Gain parameter is set to 0, changing this parameter will have no effect.*

Range: 0 – 50

Gain

Use the gain control to boost or cut with up to 24 dB at the EQ frequency.

Range: +/- 24

Repeat

Use the Repeat parameter to add delay-like repeats. The tempo is set by holding the Shift and Repeat Tempo buttons and turning the Dial. For more repeats, set a higher value. At 20, the repeats will continue indefinitely.

The “rx” settings indicates a fixed number of repeats. If you trigger the channel between the repeats, these will be added and repeated together with the original sound.

Range: 0 – 20, rx

ℹ *If the Amount parameter is set to 0, changing this parameter will have no effect.*

Amount

This parameter sets the amount or level of the repeats.

Range: 0 – 20

Level

This sets the volume of the channel.

Range: 0 – 20

Pan

This sets the position of the channel in the stereo panorama from left to right.

Range: -10 – 10

Tone Parameters

The Tone component can be described as the body of the sound. Start by selecting a waveform and then use the other parameters to get the tone just as you want it.

Spectra

This powerful parameter changes the harmonic content of the H, P, D and C type waveforms by stretching or tuning the harmonics. It has no effect on the A type (analog-style) waveforms.

Wave

There are several different waveforms in the Nord Drum 2, each with its own characteristic. Some have distinctive pitches, others are of a more non-pitched variety.

Wave	Description
A1 - A4	Analog style waveforms: Sine, Triangle, Sawtooth and Square.
H1 - H7	Harmonic waveforms.
P1 - P6	Percussive waveforms.
d1 - d8	Drum head style waveforms.
C1 - C2	Cymbals.

Dyn Timb

The waveforms can be processed with the Timbre parameter which is a lowpass filter that can make the Tone duller. The Dyn Timb allow you to open this filter with the striking force.

Range: 0 – 20.

Timbre

By setting the Timbre to any value but 20, the Tone waveform will be filtered, the sound will become duller.

Range: 0 – 20

Hi Decay

This settings allows you to change the harmonic content with a decaying envelope. If the analog waveforms are used, it controls a lowpass filter. If the H, P, or d waveform is selected, it will change the Spectra parameter over time.

Range: 0 – 50

Punch

Punch adds an short, velocity controlled attack portion to the waveform. L1 to L3 indicates three different levels of this attack.

The PU setting will shift the pitch of the very first cycle or period in the waveform up one octave, great to get a “kick” in a bass drum

sound for instance. The Pd setting will shift the pitch of the first period down one octave.

Range: L1, L2, L3, PU, Pd

Decay

The Decay sets the length of the Tone. The higher the value, the longer the sound.

Range: 0 – 50

Type/Dyn

This parameter have two functions. Choose between an Exponential or Linear curve of the Tone envelope. If you keep turning the Dial you will be able to set an second decay time (Exx or Lxx), a time that will be gradually used when you use more striking force. This second decay time can be either longer or shorter than the "original" decay.

Range: E, L, Exx, Lxx

Pitch

Use the pitch control to set the pitch of the Tone. The pitch is set in half steps of semitones and shown in the LED as MIDI Note Numbers. A setting of 69.0 equals A = 440 Hz.

Range: 11.0 - 98.5

Scl Pre

The Scl Pre allows you to quickly set up different pitch relationships between pads. Hold Shift and press the Edit Group button repeatedly to create an Edit Group. Hold the SCL Pre button and select a scale with the dial. The pitches will begin at the set pitch on the lowest numbered channel and increase with a factor determined by the selected scale on the selected channels.

SCL value	Description
SC 1-10	Pitches are increased by 1, 2, etc. semitones
P 1-3	Pentatonic, P major and P minor
H 1-5	Hang tunings
Au	Hextonic, augmented
Pr	Hextonic, prometheus
bL	Hextonic, blues

The SCL Pre is not a parameter as such, it will act as a macro on the pitches of the selected channels.

Bend Range

The Bend parameter bends the pitch of the Tone. The Bend has two directions – a negative value bends up to the set pitch, a positive values bends down. This is feature is velocity sensitive.

Range Bend: -19 / 50

Bend Time

The Bend Time parameter sets the duration of the pitch

Range: 0 – 50

Click Parameters

The Click is a sharp transient at the very beginning of a sound.

Level

Set the amount of Click with the Level parameter.

Range: 0 – 20

Type

There are several different Click types in the Nord Drum 2, each with a different characteristic. The n-clicks are noise waveforms with different characters, the p-clicks are short pulses. The C-clicks have more of a pitched and somewhat "chirpy" character.

Range: nx, Px, Cx

Mix Parameter

Use the Mix parameter to set the balance between the Tone and Noise components.

Range: 20 – 0 – 20

Shift Parameters

The second row has an additional set of parameters that are accessed by holding the Shift button while pressing the corresponding button.

The first two of these parameters are immediate actions (Copy and Paste), the rest are Global settings and features.

Some of these have more than one set or parameters. These are accessed by holding Shift and pressing repeatedly on the button.

These settings will remain in the unit after it has been turned off with one exception. MIDI Local will always revert to On when the unit is turned on.

Copy

This function allows you to copy all the settings of the selected channel. The copy can be pasted to another channel in the same program or to a channel in another program of your choice by using Paste. The copied settings will remain in a memory buffer until you perform another copy or turn the unit off.

Paste

After you have copied a channel, and selected another program and/or channel as a destination, use this function to paste the settings. The same copied settings can be pasted to several destinations, one at a time if you wish.

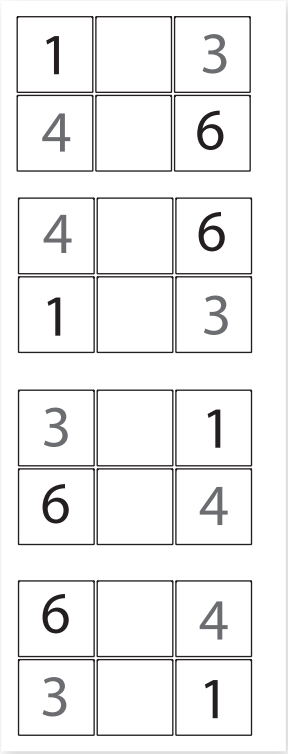
Panic

Hold Shift and press Panic to stop any ongoing sound from all the channels.

System

System PR is a memory protection that needs to be turned off before you (or cousin Dupree) can store any programs on the Nord Drum 2.

System PDL 1- 4 are four different layouts for the Nord Pad.



MIDI

There are several MIDI related settings in the Nord Drum 2.

Lo - Local On/Off is indicated as L On or L Of. Use Local Off if you use the Nord Drum 2 in a situation where a sequencer is echoing back notes and data.

Range: L On, L Of

CH - MIDI Channel: Set the Nord Drum 2 to receive MIDI on a MIDI channel of your choice.

Range: 1 -16, Off

n - MIDI Note: Each of the six channels can be manually assigned to respond to an incoming MIDI note.

Range: 0 - 127

PC - Program Change can be set to Off, Send only, Receive only and both Send and Receive. Set this to receive if you want to change the programs on the Nord Drum 2 from a MIDI controller

Range: Of, S, r, Sr

Prog allows you to dump the current program from the Nord Drum 2 as MIDI Sys Ex data. Use this to create safety copies of your individual programs or to share them with other Nord Drum 2 users. The transmission is activated by pressing the Program button.

All transmits all the programs in the Nord Drum 2 memory as MIDI Sys Ex data. The transmission is activated by pressing the Program button when “ALL” is shown in the display.

RecU prepares the Nord Drum 2 to receive a Sys Ex dump from a sequencer or computer. Press the Program button and then start the transmission on the other device.

Trig Type

The different Trig Types that allows you to match the response of the Nord Drum 2 to the output from your pad or drum trigger.

The trigger output from different types of pads and manufacturers varies a lot. The setting of the Trig Type parameter should be matched to suit the output from the pads you use.

The Input Trig Level LEDs provides information on the trigger signals from the pads. The green LED will indicate that a trigger signal is received. The red LED will blink quickly when the trigger signal is 6 dB below the maximum and it will be lit up in a longer duration when the maximum signal is fed to the Trig Input. To optimize the dynamic response, make sure that only your hardest strike lights up the red LED with the longer duration.

Here is a list of some of the pads and acoustic triggered drums that have been used during the development of the Nord Drum 2. Other pads will work, just try the different Trig Types and settings to determine which one is the best for your needs.

Trig Type	Pads, drums
Ro	Roland rubber pads (PD8 etc.)
Ya	Yamaha pads (TP65 etc.)

⚠ *Roland and Yamaha are trademarks of their respective owners and are not affiliated or associated with Clavia. These trademarks are mentioned here only as a reference to products than can be used with the Nord Drum 2*

Range: rO, Ya

Inp Thres

Use this setting to make sure that a pad mounted on the same hardware or other input device does not accidentally trigger a channel. If striking a pad that is connected to channel 2 also triggers the sound on channel 1, raise the threshold on channel 1.

Range: 0 - 99

Inp Sens

Use this setting to match the output signal of the pad or input device connected to the Trig Input of the selected channel. Adjust this to make sure that only your hardest strike lights up the red LED in its longer duration on the Input Trig Level LEDs.

Range: 0 - 99

MIDI Operation

The six channels of the Nord Drum 2 are set at the factory to be triggered by incoming MIDI Notes 60, 62, 64, 65, 67 and 69 when the unit is shipped.

If you prefer other notes this can be changed in the MIDI Note setting, read more on this on page 7.

Storing the memory content

By using MIDI Sys Ex dumps, you can store all or individual programs on a computer. The dumps have to be recorded to a sequencer or by using one of the many, free MIDI applications that can receive, save and also transmit MIDI data.

☼ *Windows users can do this with MIDI Ox (www.midiox.com), Mac OSX users can use the SysEx Librarian from Snoize Productions (www.snoize.com).*

1. Make sure that the receiver is ready to receive and that the MIDI Out from the Nord Drum 2 is connected to a MIDI In on a MIDI interface connected to the computer.
2. Press Shift and the MIDI button repeatedly until PROG or ALL is shown in the display.

   One means the current program, all means all the programs in the Nord Drum 2.
3. Start the transmission by pressing the Program button. After the transmission is complete, Ok will be shown briefly in the display.
4. Check the receiving application and make sure that the data is there. Save the file with a meaningful name on a nice place on the hard drive.

ℹ *Transmitting data will not affect the content in the Nord Drum 2.*

Receive MIDI Dumps

1. Make sure that your sequencer or MIDI application is ready to transmit a Sys Ex package and that the MIDI Out from the MIDI interface on the computer is connected to the MIDI In on the Nord Drum 2.
2. Start the transmission. The Nord Drum 2 will automatically receive incoming MIDI Sys Ex messages that it is compatible with.

If the Sys Ex package contains all the programs, the entire memory in the Nord Drum 2 will be replaced by the content of the Sys Ex package, except for any edited program that was in the edit buffer when the transmission started.

If the Sys Ex package contains one program, this program will be placed in the edit buffer of the Nord Drum 2. You have to Store this program to a location in the memory, if you want to keep it in the unit.

Updating the Operating System

The OS in the Nord Drum 2 may be updated if the functionality is subject to improvements.

This is achieved by using a MIDI transmission from a computer by using an Update Utility application that can be downloaded from the www.norddrum.com web site. The Update Utility is available for Windows or Mac OSX computers, make sure you download the one that matches your computer.

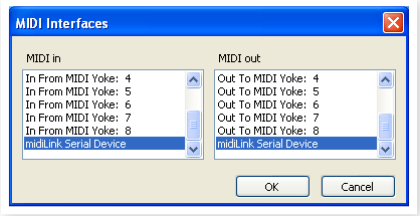
You will need a MIDI interface attached to the computer in order to perform this.

1. Connect the MIDI in and the MIDI Out from the Nord Drum 2 to the MIDI Out and MIDI in on the MIDI interface.

2. Double click on the OS utility to run the Updater.

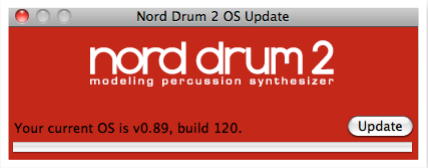
ℹ *The Windows version of the utility is a zipped archive when you download it from the website. This archive has to be expanded with an application like WinRAR before the actual utility is ready to be used.*

3. Select the MIDI ports you wish to use.



The Update Utility will display the current OS version in the connected Nord Drum 2.

4. Click on the Update button to transfer the new OS to the unit.



⚠ *In the unlikely event that the operating system is corrupted in the Nord Drum 2, hold Shift and Program/Store while powering the unit up. This will start the Nord Drum 2 in a Update Ready Mode, and then you can reload the latest OS to the unit.*

Website

Please check in from time to time on the www.norddrum.com website for OS updates, additional programs and other things that may become available.

4 Appendix

Factory Soundbank

There are 2 banks with 99 Programs locations each in the Nord Drum 2. The locations after Bank 2, number 32 are empty in order to allow you to immediately store your own edits without having to worry about overwriting any programs that you might have liked.

The entire memory content can be saved as a MIDI Sys Ex file on a computer, using the methods described on page 19 in this manual. A MIDI Sys Ex file that is a copy of the Factory Soundbank can be found on the www.norddrum.com website.

Program	Category	Name		Waveforms used in channels 1 - 6					
P1. 1	Synth	Hexagon		A2	A2	A2	A2	A2	A2
P1. 2	Real	Classic Vistalite		D2	D2	D2	D2	D2	D2
P1. 3	Mix	Blue House		D3	D3	C1	P6	D3	D3
P1. 4	Real	Brittford		D4	D4	D4	D4	D4	D4
P1. 5	Synth	Nocknockdeluxe		A2	A4	D8	A2	A2	D4
P1. 6	Synth	Anomi		A2	D8	H7	H7	H7	H7
P1. 7	Mix	Burgees		A1	D7	C1	D7	D7	C1
P1. 8	Real	TilliT		D8	D8	H5	D8	D8	D8
P1. 9	Synth	LeftHand		D8	D8	P4	P5	P5	P1
P1. 10	Scale	Minimalism		H1	H1	H1	H1	H1	H1
P1. 11	Real	Tom Timp		H2	H2	H2	H2	H2	H2
P1. 12	Scale	Blue Man		H3	H3	H3	H3	H3	H3
P1. 13	Scale	Sim Atheiste		H4	H4	H4	H4	H4	H4
P1. 14	Scale	Noisy Toms		H5	H5	H5	H5	H5	H5
P1. 15	Scale	Higgins Particle		H5	H5	H5	H5	H5	H5
P1. 16	Scale	Poor Design		H7	H7	H7	H7	H7	H7
P1. 17	Scale	Komal Cafe		P2	P2	P2	P2	P2	P2
P1. 18	Scale	Kambodian		P3	P3	P3	P3	P3	P3
P1. 19	Scale	Bend Down		P4	P4	P4	P4	P4	P4
P1. 20	FX	Flying Dront Circus		P4	P4	P4	P4	P4	P4
P1. 21	Machine	Tribunal		A1	C1	C1	C1	C1	C1
P1. 22	Machine	Pesto		D8	P2	C1	P2	P2	P2
P1. 23	FX	Moratorium		A3	A3	A3	A3	A3	A3

P1. 24	Scale	ThurisimoKick		D8	P2	P2	P2	P2	P2
P1. 25	Synth	Red Three Beat		A3	A3	A3	A3	A3	A3
P1. 26	Real	Autocrat		A2	D4	D4	D4	D4	D4
P1. 27	Scale	Plingaling		P2	P2	P2	P2	P2	P2
P1. 28	Real	King PatMat		A2	A2	A2	A2	A2	A2
P1. 29	Scale	Apostasy		A4	A4	A4	A4	A4	A4
P1. 30	Scale	Chinese Doorbell		P2	P2	P2	P2	P2	P2
P1. 31	Scale	Paradiddle		P5	P5	P5	P5	P5	P5
P1. 32	Scale	Hells Bell		P4	P4	P4	P4	P4	P4
P1. 33	FX	Noise		H1	H1	H1	H1	H1	H1
P1. 34	Scale	Maracadrum		A3	A3	A3	A3	A3	A3
P1. 35	FX	FRA Hats		C1	C1	C1	C1	C1	C1
P1. 36	FX	Cymbols		C1	C1	C1	C1	C1	C1
P1. 37	FX	Noise Royalty		C1	C1	C1	C1	C1	C1
P1. 38	Scale	Willy-Nilly		H1	H1	H1	H1	H1	H1
P1. 39	Scale	Glocken Repeat		C1	C1	C1	C2	C2	C2
P1. 40	Scale	Eastern Vibe	JE	P1	P1	P1	P1	P1	P1
P1. 41	Mix	Sammelsurium	JE	D6	D8	C1	D7	D6	D1
P1. 42	Scale	Tour De Force	JE	H1	H1	C1	H1	H6	H1
P1. 43	Mix	Diesel Bells	JE	P2	P2	P2	P2	P2	P2
P1. 44	Scale	Japan Groove	JE	H1	H1	C1	P4	P4	C1
P1. 45	Mix	Strung	JE	H5	H5	H5	H5	H5	H5
P1. 46	Scale	Plastic Ono	JE	D4	P6	P6	P6	D3	P4
P1. 47	Machine	Plastic Toms	JE	P4	P4	P4	P4	P4	P4
P1. 48	Mix	Nabo	JE	A3	A3	H4	A3	A3	A3
P1. 49	Machine	The Drop	JE	A3	D4	P2	A1	D4	P1
P1. 50	Machine	Technocrat	JE	H1	P3	H1	A1	H6	P1
P1. 51	Machine	Wenderz	JE	D4	H4	C1	H4	H4	H4
P1. 52	Synth	Riot Child		H5	H6	H1	D3	D3	D3
P1. 53	Machine	Megalomania		H2	P3	D1	D1	D1	D1
P1. 54	Machine	Retrograd	JE	H6	H5	H1	H3	H3	H3
P1. 55	Synth	Broken Child		H1	H3	H3	P4	H3	H1
P1. 56	Real	Trap	JE	D2	D5	D5	D1	H6	P4
P1. 57	Machine	Krimsonite	JE	P4	P5	D1	D1	D1	H1
P1. 58	Machine	Cumbia Maker	JE	H5	H5	H6	D3	D3	D3
P1. 59	Mix			H7	D1	D1	P3	H1	C1
P1. 60	Synth	Cinematikino		H6	H5	H1	H3	H3	H3

P1. 61	Synth	Neophile		H1	H3	H3	P4	H1	H1
P1. 62	Synth	Vreeland		D2	D5	D5	D1	H6	P4
P1. 63	Machine	Catalog		P4	P5	D1	D1	D1	H1
P1. 64	Machine	DM1		A1	A1	P2	A1	A1	P6
P1. 65	Machine	DM2		A1	A1	P2	A1	A1	P6
P1. 66	Machine	DM3		A1	A1	C1	A1	A3	P6
P1. 67	Mix	Grand Casa		A1	A1	C1	A1	A3	P6
P1. 68	Synth	Mute my Brain		A1	A1	C1	A1	A3	P6
P1. 69	Machine	Reapeter		A1	A1	C1	A1	A3	P6
P1. 70	Synth	Terror of Death		P1	P1	P1	P1	P1	P1
P1. 71	Synth	Causa Sui		P5	D2	H3	D4	D2	D2
P1. 72	Machine	Totem and Taboo		A1	D2	A1	A1	A3	A1
P1. 73	Real	Shutupness		D1	D6	D1	D1	D1	D1
P1. 74	Machine	Magical Umbrella		A1	A1	P2	A1	A1	P6
P1. 75	Mix	Delta Machine		A1	H1	C2	H1	P2	H1
P1. 76	Scale	A.T.		H1	H1	H1	H1	H1	H1
P1. 77	Synth	Arthro		A2	D7	C1	D7	D7	C1
P1. 78	Synth	Styles of Madness		H7	A2	A2	A2	A2	A2
P1. 79	Scale	Darwin		P4	P4	P4	P4	P4	P4
P1. 80	Scale	Empress		H1	H1	H1	H1	H1	H1
P1. 81	Real	Nurbergring		H2	H2	H2	H2	H2	H2
P1. 82	Mix	Tama Sattva Raja		D8	P2	C1	P2	P2	P2
P1. 83	Real	Melancholia		H1	H1	H1	H1	H1	H1
P1. 84	Machine	Anhedoia		A1	A1	P2	A1	A1	P6
P1. 85	Scale	Triangulus		A3	A3	A3	A3	A3	A3
P1. 86	Real	Orchestralesque	JE	P6	D3	P1	D7	D7	D7
P1. 87	Machine	Tight Ruler	JE	D7	D2	C2	C1	D2	H5
P1. 88	Mix	Attic Jazz	JE	H1	H6	H1	H7	H7	H7
P1. 89	Real	Rehearsal Space	JE	D7	D3	C2	D7	D7	D7
P1. 90	Machine	Trapdoor	JE	A4	C2	C2	D2	A3	P3
P1. 91	FX	Elevate	JE	H1	C1	H5	H1	H1	H7
P1. 92	Machine	Waterbowl	JE	A3	H1	D5	D2	H1	H1
P1. 93	Scale	Wind Machine	JE	P1	P1	P1	P1	P1	P1
P1. 94	Machine	No Reason		D3	H1	C1	A1	A1	C1
P1. 95	FX	Erfarenheit		H1	H3	H3	P4	H3	H1
P1. 96	FX	Frogressive Rock		D2	D5	D5	D1	H6	P4
P1. 97	FX	Taksim Obaköy		P3	A2	C1	H1	H1	P6

P1. 98	Scale	Waiting Man		A1	A1	A1	A1	A1	A1
P1. 99	Mix	Youthquake		A1	D4	C1	D7	D7	C1
P2. 1	Machine	Marching Cans	JE	A1	A1	C2	A1	A1	C2
P2. 2	Real	Rain On The Roof	JE	D1	D3	C2	D7	D7	C2
P2. 3	Machine	Street Dancers	JE	P6	P6	H5	H7	H7	P5
P2. 4	Real	Badu Beat	JE	A1	P5	C2	P5	P5	H1
P2. 5	Mix	Dishwasher Song	JE	P1	P6	C2	D8	D8	C2
P2. 6	Machine	Crystal Disco	JE	A2	P3	P4	H1	H7	H7
P2. 7	Scale	The Hulk	JE	P3	P3	P3	P3	P3	P3
P2. 8	FX	Kigali Bend	JE	P5	D6	C2	D6	P1	P1
P2. 9	Machine	Trashcan Treasure	JE	P3	P6	C1	D3	D3	D3
P2. 10	Machine	Retro Love	JE	A1	A1	C2	A1	A1	P3
P2.11	FX	Venetian Blinds	JE	A1	H1	H1	H1	H1	C1
P2.12	Machine	Mental Overdrive	JE	A2	A2	C2	P1	P1	H1
P2.13	Scale	Mario's Caverns	JE	H2	H2	H2	H2	H2	H2
P2.14	Machine	Club Mate	JE	H2	P2	C1	H5	P5	D2
P2.15	Machine	Icy Hot	JE	H2	D3	D4	H1	H1	D4
P2.16	FX	Crunchy Bits	JE	D6	C1	H3	D3	D3	H1
P2.17	Machine	Tinkerbell Raving	JE	A2	D1	H1	P4	H7	C2
P2.18	Machine	Night Rida	JE	P1	P6	C2	H1	H1	C1
P2.19	Scale	Glass Spiders	JE	P4	P4	P4	P4	P4	P4
P2.20	Mix	Water Buckets	JE	P4	H1	C1	P3	H5	P5
P2.21	Mix	Cuban Cigar	JE	D6	H1	C2	P6	P5	H7
P2.22	Synth	Rate of Fire	JE	H1	H4	C2	P4	P4	H3
P2.23	Machine	Voyage	JE	D7	D1	C2	P3	D5	C2
P2.24	Machine	Pristine Program	JE	A4	A1	C1	A4	A4	P3
P2.25	Synth	The Fork	JE	D4	D1	C2	H1	H1	H1
P2.26	Mix	Handclaps, delete	JE	H1	C2	C2	C2	D2	D2
P2.27	FX	Frogyear	JE	H1	H1	H1	H1	H1	H1
P2.28	Machine	Tutti Frutti	JE	H1	D8	C2	D2	P3	P3
P2.29	Machine	Perc Heathen	JE	A1	A1	C2	C2	P1	P5
P2.30	Scale	Clavius Bells	HN	D6	D6	D6	D6	D6	D6
P2.31	Synth	Vincent		D1	D1	C1	P2	D5	C1

Categories

Real: “Acoustic”.

Synth: Old school sounds.

Mix: Well, mixed, sort of.

Scale: Tuned things.

FX: Weird tweaks and FX.

Machine: Machine sounds.

FCC Information (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Clavia may void your authority, granted by the FCC, to use the product.

2. IMPORTANT: When connecting this product to accessories and/ or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment is found to be the source of interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

DECLARATION OF CONFORMITY
Compliance Information Statement

Model Name : Nord Drum 2

Type of Equipment : Digital Drum unit

Responsible Party :Clavia DMI AB

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